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AMENDED SPECIFICATION.

Reprinted as amended, under Section 8 of the Patents and Designs Acts, 1907 and 1919.

PATENT SPECIFICATION



Application Date: March 26, 1923. No. 8552/23.

201,114

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COMPLETE SPECIFICATION (AMENDED).

Improvements in Hinge Lasts.

I, JOHN CHARLES IREDALE, a British subject, residing at the Town of Preston, in the County of Waterloo, and Province of Ontario, Dominion of Canada, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a hinge last comprising a fore part and a heel part, of any usual or preferred type, capable of movement between an extended and a collapsed position, a hinge member connecting the fore and heel parts which will operate to maintain them in their assembled relation and permit them to move between said positions, and a resilient fulcrum, interposed between the fore part and the heel part and preferably arranged transversely of the last, about which the said parts turn and which yieldingly stresses said parts as they move between said positions and co-operates with the hinge member for maintaining them in their extended or collapsed position.

For an understanding of my invention reference is to be had to the following description and to the accompanying drawings in which:

Fig. 1 is a sectional elevational view of the last, showing the fore part and heel part in their extended position,

Fig. 2 is an elevational view of the last showing the heel part and the fore part in their contracted position,

Fig. 3 is a fragmentary transverse sec-

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tional view of the heel and fore parts, and

Fig. 4 is a perspective detail view of a modified form of the fulcrum shown in Fig. 3.

Like characters of reference refer to like parts throughout the specification and drawings.

The last comprises a fore part 1 and a heel part 2 which may be of any usual or preferred type; a hinge member 3 connecting the fore part and the heel part and permitting them to swing into either their extended or collapsed position, and a transverse resilient fulcrum 4 interposed between the fore part and the heel part, to yieldingly hold them either in their extended or collapsed position, and about which the heel part turns when moving between said positions.

In the preferred construction the hinge member 3 consists of a suitably shaped plate having a central elliptically shaped slot or through-aperture 5, the major axis of which is transverse to the major axis of the plate and two pin apertures 6 and 7 for the hinge pins 8 and 9 respectively, connecting the fore and heel parts to the hinge member.

The heel and fore parts are formed with a recess 10 of corresponding shape and dimensions to the hinge member 3 in which it is entered when the parts are assembled. Formed in the fore part 1 is a transverse bore 11 in line with the aperture 7 of the hinge member 3 and formed in the heel part 2 is a transverse bore 12 in line with the aperture 6 of the

hinge member 3. The hinge pins 8 and 9 are entered in the bores 12 and 11 and through the pin apertures 6 and 7 respectively to inseparably connect the hinge member and the fore part and heel parts of the last when assembled.

Between the fore and heel parts and passing transversely through the elliptical aperture 5 is the resilient fulcrum 4, located in substantially semi-circular recesses or bearings 14 in the adjacent faces of the fore and heel parts provided to contain the resilient fulcrum and to guide the movement of the fore and heel parts as they turn between said positions.

The resilient fulcrum may take the form either of a helical spring, as shown in Fig. 3, or a substantially cylindrical spring as shown in Fig. 4, and its diameter corresponds to the diameter of the recess 14 to enable it to bear continually against both the fore and the heel parts and stress these parts sufficiently to maintain them in their extended and in their collapsed position. During the turning movement of the heel part between its extended and its collapsed position the center of the hinge plate changes with regard to the center of the fulcrum as shown in Fig. 1, in which the top of the elliptical aperture 5 is in contact with the resilient fulcrum when the heel and fore parts are in their extended position and in Fig. 2 in which the bottom of the elliptical aperture is in contact with the resilient fulcrum when the heel and fore parts are in their collapsed position.

The hinge member shown in the accompanying drawings is preferably of a non-resilient character for the purpose of holding the fore and heel parts rigidly connected in their extended and collapsed positions and when moving between these positions and for the purpose of providing ample resistance to any torsional or twisting strain between the two parts of the last or any lateral strain to which they may be subjected. The location of

the hinge pins with relation to each other is such that the fore and heel parts will be under more or less strain when the last is either extended or collapsed and operates to hold the two parts of the last firmly against each other and to prevent any loose play; being assisted in this respect by the resilient fulcrum which takes up any looseness that may occur.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A hinge last comprising a fore part and a heel part capable of movement between an extended and collapsed position, a hinge member connecting the fore and heel parts which will operate to maintain them in their assembled relation and permit them to move between said positions, and a resilient fulcrum interposed between the fore and heel parts about which they turn.

2. A hinge last according to Claim 1, in which the fulcrum yieldingly stresses the fore and heel parts as they move between their positions and co-operates with the hinge member for maintaining them in their extended or collapsed position.

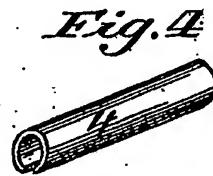
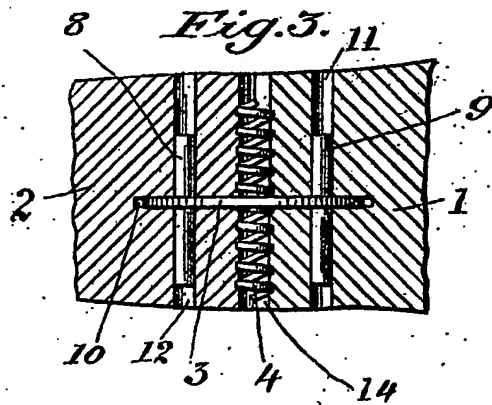
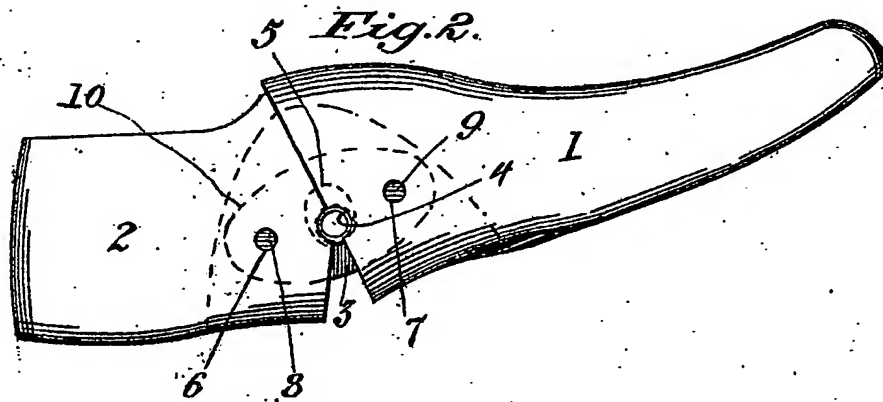
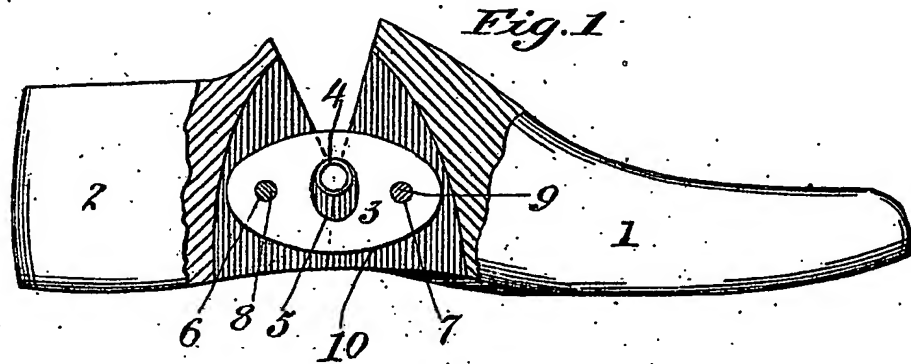
3. A hinge last according to Claim 1 or 2, in which the resilient fulcrum is arranged transversely of the last; and is located in recesses formed in the adjacent faces of the fore and heel parts.

Dated this 26th day of March, 1923.
For the Applicant,

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Reference has been directed, in pursuance of Section 8, Sub-section 2, of the Patents and Designs Acts, 1907 and 1919, to Specification No. 210,523.

[This Drawing is a reproduction of the Original on a reduced scale.]



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